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## Editorial

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**Biographical notes:** D. Jude Hemanth received his BE degree from Bharathiar University, India in 2002, ME degree from Anna University, India in 2006 and PhD degree from Karunya University, India in 2013. He has published several research papers in several SCIE indexed international journals and reputed international conferences. He has written books on 'soft computing' approaches with leading international publishers. He has organised several international conferences across the globe. He also serves in various positions of editorial board of many international journals. His current areas of interest are soft computing techniques, image processing and biomedical applications.

Ali Ismail Aawad is currently an Associate Senior Lecturer at Department of Computer Science, Electrical and Space Engineering, Luleå University of Technology, Luleå, Sweden. He also holds a permanent position as an Assistant Professor at Electrical Engineering Department, Faculty of Engineering, Al Azhar University, Qena, Egypt. He received his BSc from Al Azhar University, Egypt, 2001, MSc degree from the Minia University, Egypt, 2007, and PhD degree from Kyushu University, Japan, 2012. He has been awarded his second PhD degree from Minia University, Egypt, May 2013. He has published several papers in peer-reviewed international journals and peer-reviewed international conference proceedings. He also served as a technical programme committee member and reviewer in many worldwide conferences. He is responsible for organising special sessions, workshops and journal special issues. His research interests include biometrics technologies, pattern recognition and communication networks.

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Soft computing approaches are an integral part of computational vision applications. The merits of these techniques are enormous which forces everyone to adapt soft computing techniques for their applications. One of the fields which make wide use of soft computing approaches is the image processing. In this special issue, focus is given to developing novel soft computing approaches for performance enhancement of image processing applications. This special issue emphasises to bring out the hidden positives of

soft computing approaches which could provide solutions to the numerous problems of the computer vision society.

The first paper is an application-oriented paper in which the computer assisted modelling of a solar cell is developed. Extensive analysis on the work is also performed to validate the proposed approach. The second article is also an application paper which shall be much useful for the agricultural society. The weeds and the useful crops are distinguished using modular networks with the combination of textural features. Experimental results are also performed to check the possibility of the proposed approach for practical applications. The third paper can be used in the medical field where the efficiency of the breast cancer diagnosis system can be enhanced. Several features are extracted from the abnormal breast cancer images which are further given as input to the classifiers. The success of the proposed approach is judged in terms of accuracy.

The fourth paper is an approach based paper in which a new attempt for mathematical modelling of the visual attention process is made with the help of the spiking neural networks. Human eyes always fix their attention on a specific object for which the reason remains unknown. This mystery is revealed to some extent with the concept of spiking neural networks. The fifth paper is again an application-oriented paper which can be used for security based works. The face of the human beings is used as a recognition symbol in this work. This work also concentrates on 3D inputs of the human faces which are efficient for omni-directional applications. The approach used in this work is also quite interesting which is supported with extensive experimental results.